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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/544,116	10/04/2005	Luc Moens	22.32-WO-US	8632
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CYTEC INDUSTRIES INC. 1937 WEST MAIN STREET P.O. BOX 60 STAMFORD, CT 06904-0060				
EXAMINER				
LSTVOYB, GREGORY				
ART UNIT		PAPER NUMBER		
1765				
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10/22/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/544,116

**Applicant(s)**

MOENS ET AL.

**Examiner**

GREGORY LISTVOYB

**Art Unit**

1765

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 September 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 29-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 29-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/22)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/13/2010 has been entered.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 29-41 and new claim 42 rejected under 35 U.S.C. 103(a) as being unpatentable over Kaplan et al (US 5889126) herein Kaplan ((cited in the previous Office Action) in view of Moens (WO 98/18862, cited with equivalent US patent 6635721) (cited in the previous Office Action)..

Regarding claims 29-33, Kaplan discloses powdered thermosetting compositions which comprise:

A powdered thermosetting composition comprising:

a) a carboxylic acid group containing amorphous polyester having an acid number of from 10 to 400 mg KOH/g (see Abstract) and Mn within the range of 300-15000 (see Claim 2) prepared from:

(a) a polyacid constituent comprising:

(i) at least 50 mol, preferably 80 mol of isophthalic acid (IPA) (see Column 2, line 55); and

(ii) the balance of another aliphatic, cycloaliphatic or aromatic polyacid, including cyclohexanedicarboxylic acid (see Column 2, line 65);

and

(b) a polyol constituent comprising:

(i) one or more of a linear chain aliphatic C4-16 diol (see Column 3, line 10);

(ii) at least 50% mol of neopentyl glycol (NPG) (see Column 3, line 20);

(iii) another linear chain aliphatic and/or cycloaliphatic diol, including 1,4-butanediol, ethylene glycol trimethylolpropane (see Column 3, line 15).;

and

(iv) small amount of a polyol with 3 or more hydroxyl groups (see Column 3, line 20); and

J3) a cross-linking agent having at least two hydroxyalkylamide groups (see Abstract); where powdered thermosetting composition contains no semi-crystalline polyester.

Regarding (i), Kaplan does not teach 81-100% of isophthalic acid (The reference discloses at least 50%, preferably 80%). However, clause "at least 50%" covers the range of 81-100%.

In addition, in the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990), *In re Geisler*, 116 F.3d 1465, 1469-71, 43 USPQ2d 1362, 1365-66 (Fed. Cir. 1997), *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985), *In re Harris*, 409 F.3d 1339, 74 USPQ2d 1951 (Fed. Cir. 2005); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992); and MPEP § 2144.05.

A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

Therefore, it would have been obvious to a person of ordinary skills in the art to use 81-100% in Kaplan's composition, since it can be determine in the course of routine experimentation.

Regarding Claims 34, 40 and 41, Kaplan teaches flow control agent (see Column 5, line 30), film application apparatus, coating temperature of 200C and aluminium plate substrate (sees Column 8, line 65).

In addition, note that components of claims 30, 32, 33 and 37 are optional.

Note that Kaplan does not teach ICI (cone/plate) viscosity values at 200C. However, since the above value primarily depends on Molecular Weight, Kaplan's composition meets the viscosity values of Claim 35.

Kaplan does not disclose exact composition of amorphous polyester as claimed in Claim 20. Consequently, since Tg is a function of the composition structure, Kaplan does not teach Tg values within the claimed range.

However, Kaplan's disclosure does not preclude the composition of Claim 29 of the Application examined, since the reference discloses all the claimed components. According to MPEP 2123, disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments (see also *In re Susi*, 440 F.2d 442, 169 USPQ 423 (CCPA 1971), *In re Gurley*, 27 F.3d 551, 554, 31 USPQ2d 1130, 1132 (Fed. Cir. 1994) , *In re Fulton*, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004).

Regarding claim 42, Kaplan teaches both individual amorphous polyester and its mixture with semi-crystalline polymer (see Abstract).

In addition, Moens teaches powdered thermosetting composition, having the same structure as claimed in Claim 29 of the Application.

Moens discloses thermosetting composition (see Abstract) comprising amorphous polyester with acid number within the range of 15-100 mg KOH (see Claim 1) containing 70-100% mol of Isophthalic Acid 0-30% of at least one other aliphatic acid 70-100 mol% of neopentyl diol and 0-30 mol% of at least one other aliphatic polyol (see Abstract) and hydroxyalkylamide as a crosslinking agent in thermosetting coating composition (see Claim 17).

Moens teaches that polyester has  $M_n$  values, determined by GPC, within the range of 1100-15500, where  $T_g$  is 40-80C and melt viscosity is 5-15000 Mpa\* s (see Claims 1, 10, 12, 13)

Moens discloses fumaric, maleic, terephthalic acid, 1,4 butanediol and trimethylolpropane (see Column 6, line 5 and line 20).

Moens discloses amorphous polyester containing 70-100% mol of Isophthalic Acid, 0-30% of at least one other aliphatic acid 70-100 mol% of neopentyl diol and 0-30mol% of at least one other aliphatic polyol (Abstract).

Moens discloses thermosetting composition, having 4-50% wt of crosslinking agent hydroxyalkylamide (see Claims 17 and 19), 55- 95%wt of the above amorphous polyester (see Claim 1), light adsorbers, pigments, etc.

Regarding claim 34, Moens teaches pigments and flow control agents (see Column 9, line 10).

In reference to claims 39-41, Moens teaches coating process, where substrate is a metal, comprising application of thermosetting powder by electrostatic or gun deposition with following heating at temperature of 150-220C.

Moens discloses thermosetting composition (see Abstract) comprising amorphous polyester with acid number within the range of 15-100 mg KOH (see Claim 1) containing 70-100% mol of Isophthalic Acid 0-30% of at least one other aliphatic acid, 70-100 mol% of neopentyl diol and 0-30mol% of at least one other aliphatic polyol (see Abstract).

Moens teaches that polyester has Mn values, determined by GPC within the range of 1100-15500, Tg is 40-80C and melt viscosity 5-15000 Mpa\* s (see Claims 1, 10, 12, 13) and hydroxyalkylamide as a crosslinking agent in thermosetting coating composition (see Claim 17).

Moens discloses fumaric, maleic acids and terephthalic acid and 1,4 butanediol, trimethylolpropane (see Column 6, line 5 and line 20).

Moens teaches that his composition has a very good mechanical properties and excellent weatherability.



Therefore, it would have been obvious to a person of ordinary skills in the art to use Moens 's amorphous polymer in Kaplan's applications in order to achieve good mechanical properties and excellent weatherability.

### ***Response to Arguments***

Applicant's arguments filed 9/13/2010 have been fully considered but they are not persuasive.

Applicants additionally contend that the combination of Kaplan and Moens is improper on its face because Moens, viewed as a whole, requires a polyester composition having both a semi-crystalline polyester and an amorphous polyester.

However, primary reference (Kaplan) discloses that amorphous polyester can be applied alone or in combination with semicrystalline one (see Abstract).

Applicant submits Affidavit under 37CFR 1.132 signed by Mr. Moens.

However, the Declaration above does not have any new experimental data.

Kaplan does not teach or suggest the claimed ratio of the carboxyl functional amorphous polyester or the 13-hydroxyalkylamide cross-linking agent.

However, secondary reference (Moens) discloses claimed amount of the cross-linking agent. The same argument applies to the amount of carboxy functional polyester.

Applicant argues that 13-hydroxyalkylamide cross-linking agent of Kaplan is of a very particular type (i.e., custom designed copolyester containing 13-hydroxyalkylamide end groups), whereas the claimed invention allows the use of standard commercially available 13-hydroxyalkylamide.

However, Kaplan's material does not prohibited for use in the Application examined, as it claimed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GREGORY LISTVOYB whose telephone number is (571)272-6105. The examiner can normally be reached on 10am-7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GL  
/GREGORY LISTVOYB/  
Examiner, Art Unit 1765